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EUI Working Paper SPS No. 91/8

**Expansion of the Tertiary Sector and Social Inequality.  
Is there a New Service Proletariat  
Emerging in the Federal Republic of Germany?**

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**EUROPEAN UNIVERSITY INSTITUTE, FLORENCE**  
**DEPARTMENT OF POLITICAL AND SOCIAL SCIENCES**

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Printed in Italy in April 1991  
European University Institute  
Badia Fiesolana  
I-50016 San Domenico (FI)  
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Expansion of the Tertiary Sector and Social Inequality

Is there a New Service Proletariat  
Emerging in the  
Federal Republic of Germany?

by

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Draft

February, 1991

Paper prepared for the workshop on "Comparative Perspectives on Industrial Transformations and Job Trajectories", European University Institute, Fiesole, Italy, February 25-26, 1991. Thanks are due to Clare Tame for comments on earlier versions.





## 1. Introduction

During the last fifty years, all modern societies have seen a rapid change in occupational distribution and a shift in employment from the primary to the secondary sector, and from the secondary to the tertiary sector (e.g. Müller 1985; Erikson and Goldthorpe 1985; Haller 1989; Goldthorpe 1986; Mayer et al. 1989). This trend towards a post-industrial society has inspired sociologists and economists to develop hypotheses about the nature of the new structure of employment. Daniel Bell (1975), for example, claimed that the post-industrial society will be characterized by an expansion of the professions, and of the occupations in engineering, technology, and the sciences. Harry Braverman (1977), on the other hand foresaw a polarization of unskilled and skilled work, and predicted a relative increase in the proportion of all kinds of unskilled jobs.

The shape of social inequality in post-industrial societies is very much dependent upon which of these hypotheses turns out to be correct. If the number of skilled and highly skilled jobs is expanding, then chances to get better positions will become much greater, while if it is the unskilled jobs that are growing, then socio-economic opportunities will decline (Sorensen 1983; Goldthorpe and Payne 1986). However, the consequences as regards social mobility of both, either an upgrading or a downgrading of the workforce, will also differ across nations (Haller 1989). There is evidence, for instance, that historically established differences in nation-specific labor market barriers and in educational environments persist during the structural transformations resulting from modernization (König and Müller 1986; Haller 1989; Featherman, Selbee and Mayer 1989; Mayer et al. 1989; Allmendinger 1989; Haller 1989).

Given the rapid changes that have taken place in the occupational structure in West Germany since the end of World

War II (Blossfeld 1989; Mayer et al. 1989), this article will focus on the question of whether there is a new service proletariat emerging in the Federal Republic. A service proletariat, that is, of a significant quantitative size, which is mutually differentiated in its labor market chances from the traditional worker's proletariat (Esping-Andersen 1991:8), and trapped into a vicious cycle of underprivilege over the life course (Giddens 1973).

Using data from the German Life History Study (Mayer and Brückner 1988) and the German Socio-economic Panel (Hanefeld 1987), we will analyse the educational and occupational careers of men and women over the last fifty years. We will describe (1) to what extent men and women from successive birth cohorts enter unskilled service jobs; (2) how far this entry pattern is connected with the specific structure of the German educational system; (3) whether the proportions of unskilled service workers is stable over the later job career for men and women from different birth cohorts; and (4) how employment in unskilled service jobs is related to other occupational groups, unemployment, and family work. We will begin by discussing several hypotheses on the service proletariat and its specific conditions in Germany. Then, after describing the data-sets and the classification of occupations, we will report the results of our analyses.

## 2. Theoretical perspectives on a service proletariat in Germany

A systematic theoretical treatment of a service proletariat is notably absent from the literature on social inequality and social mobility. Available class-theoretical conceptions have been centered around the worker-owner division and have distinguished classes along the authority dimension characteristic for industrial capitalism (Esping-Andersen 1991). The most widely used class schemes in empirical



analyses - developed by Olin Wright (1979, 1989) in a Marxist tradition and by John Goldthorpe (1980, 1987) from a Neo-Weberian point of view - thus do not differentiate between industrial and post-industrial class positions.

In a world which is increasingly characterized by post-industrial employment, however, these traditional conceptualizations of social class may not only increasingly lose their analytical value, but may also miss important new trends of social inequality in modern societies. In his recent work, Gösta Esping-Andersen (1991:5-9) has therefore advocated a differentiation between jobs based on the logic of what he calls, the "fordist" versus "post-fordist" division of labor. Esping-Andersen demonstrates this differentiation at three occupational levels. At the highest level of the occupational pyramid he distinguishes between scientists-professionals and managers-administrators, because professionals will usually stand outside the lines of command, and possess autonomy but probably little authority over subordinates. At the intermediate level of the job pyramid he differentiates between the semiprofessionals and technicians and the lower level management and administrative workers, because the former carry out the more routine professional tasks and the latter carry out the more routine managerial orders. Finally, at the lower level of the job pyramid he divides unskilled and skilled manual workers on the one side from unskilled and skilled service workers on the other because both have very little in common in terms of autonomy, authority, labor relations and reward systems. For example, "...an unskilled factory worker and a fastfood counter worker occupy two distinct worlds of work; the former operates machines in subordination to a managerial hierarchy with relatively clear productivity-reward definitions; the latter services households ... with only vague hierarchies and productivity-reward definitions" (Esping-Andersen 1991:8).

If we accept Esping-Andersen's theoretical reasoning here that

unskilled service workers live in a very specific world of work, characterized by a "post-fordist" logic, then, following Max Weber (1978), we can ask to what extent the service proletariat in Germany forms a new social class by sharing a specific labor market position, i. e. a typical pattern of job mobility between a larger number of occupational categories (Mayer and Carroll 1987). Esping-Andersen's position would be strengthened, if we could detect for the service proletariat a mobility pattern that differs qualitatively from that of other occupational groups, especially from the "fordist" unskilled manual jobs and the "fordist" unskilled commercial and administrative jobs. It should be a mobility pattern that derives from the specific "location" of the service proletariat in the total structure of the occupational system and influences the movement into and out of the unskilled service class (Carroll and Mayer 1986; Mayer et al. 1989:226).

From the perspective of class-formation, however, it is important that such an emergent service proletariat also reflects the tendency to "hold" its members over time, so that it can form a stable and permanent class core that gives content to a unique demographic identity (Mayer and Carroll 1987; Featherman, Selbee and Mayer 1989). Membership of the service proletariat should therefore be highly stable across the working life. An emerging service proletariat as a social class should constitute an absorbing state with only few exits. Only under such conditions can the unskilled service class become a more thoroughgoing context for adult socialization and for differential allocation of socioeconomic and personal welfare (and by extension, for the children born to parents within this class) (Featherman, Selbee and Mayer 1989:89).

The quantitative importance of any new service proletariat in the post-industrial society is, of course, dependent on the type of jobs expanding in the tertiary sector and their related skill requirements. If Braverman's (1977) low-skill hypothesis



is correct, the modernization process should lead to an increasing number of unskilled service jobs over time, whereas if Bell's (1975) thesis of the growing service elite is true, then we should find a stable or even declining proportion of people employed in unskilled services.

In principle there are two ways in which changes in the occupational structure and shifts from the primary to the secondary and from the secondary to the tertiary sector can take place (Janossy 1966). On the one hand, changes in the occupational structure can intensify worklife mobility and force people to move to other jobs. Because jobs in the unskilled service sector are easy to enter and because new entrants are soon on an equal footing with experienced employees, unskilled service jobs are likely to be turned over for second careers (Kaufman and Spilerman 1982). The service proletariat should therefore have an overrepresentation of older workers coming from declining occupations. Furthermore, in Germany such job shifts to the service proletariat can particularly be expected if general educational attainment is low (Blossfeld 1989; Featherman, Selbee and Mayer 1989). On the other hand, changes in the occupational structure can be brought about by generational change (Ryder 1965): the new entrants into the labor market will then take up new jobs, while workers leaving the labor market simultaneously leave obsolete ones. This type of change is, of course, particularly important for the expansion of new highly-skilled jobs (e. g. computer scientists, engineers and professionals) in which a lengthy and up-to-date training is a prerequisite for job performance (Blossfeld 1989). Unskilled service jobs may also be filled by young people, entering the labor market. There are, however, two different interpretations of this type of youth employment which are crucial for the service proletariat as a new social class.

The first interpretation is based on the notion that unskilled service jobs are to a large extent "youthful stopgap jobs"

(Oppenheimer 1989). They appeal especially to young people who have not yet committed themselves to a career or who for other reasons seek intermittent employment (Kaufman and Spilerman 1982). After a certain time, these young people make up their minds, enter a career line and ultimately end up at very diverse occupational destinations. Thus, working in unskilled service jobs bears little relation to the "adult" occupational career, and employment in these jobs will provide almost no clues as to a person's long-run socioeconomic wellbeing. In her analysis for the United States, Valery Oppenheimer (1989) presents empirical evidence that "... stopgap jobs exhibit low retention rates over a five-year period and the great majority of leavers move to career or career-entry jobs" (Oppenheimer 1989:29).

The second interpretation is based on Doeringer and Piore's (1971) hypothesis of the dual labor market. The basic idea is that the labor market consists of two basic types of jobs, depending on whether employers invest in the training of employees (primary labor market) or refrain from doing so (secondary labor market). The primary market "... offering relatively high-paying, stable employment, with good working conditions, chances of advancement and equitable administration of work rules; and the ... secondary market... decidedly less attractive in all of these respects..." (Piore 1969:102). Because secondary labor market jobs are dead-end jobs that have no links with career ladders and institutionalized internal labor markets, there is no coherent career sequence. Therefore, dualists argue that workers become trapped in secondary labor markets, leading to a low level of mobility out of such markets. Entry into unskilled service jobs at the beginning of the job career will therefore confine mobility mainly to unskilled service jobs or other unskilled job categories across the working life.

A recent analysis of labor market segmentation, however, has shown that in Germany internal labor markets are less



responsible for labor market barriers than they are, for example, in the United States (Blossfeld and Mayer 1988). Instead, labor market segments in Germany are much more the result of qualification barriers. Germany, in contrast to other Western industrial countries, particularly the United States, has a highly developed system of vocational training. This system (1) normally combines theoretical learning in school with practical experiences at the workplace, (2) provides highly standardized learning conditions for well-defined occupational titles, (3) leads to a strong differentiation between unskilled and semi-skilled workers on the one hand and the occupationally trained workers on the other, and (4) gives trained workers the opportunity to climb the job ladder, for example, as master craftsmen and technicians, semiprofessionals, skilled administrators, managers, and also often as technical college engineers (Blossfeld 1990a, 1990b). Thus the labor market in Germany is strongly divided by qualifications and access to jobs across the working life is based mainly on training certificates. People without completed vocational training who enter into unskilled service jobs at the beginning of their job career therefore have virtually no chance of a career and access to skilled positions later on in life (Blossfeld 1989).

It is true that some skilled workers move to unskilled and semi-skilled positions after they have completed vocational training (Hofbauer 1983), but in comparison with other countries such as the UK and the United States, this type of downward occupational mobility is rare in Germany and upward mobility is the general pattern (König and Müller 1986; Blossfeld and Mayer 1988). Hence, the proportion of skilled people who move down to unskilled jobs, and hence to unskilled service jobs, should be very limited in our analysis.

Again, in comparison with countries such as the UK and the United States, the German vocational training system also allows a large number of young people to make a smooth

transition from the general educational system to the employment system because the vocational training system feeds directly into the job system (Blossfeld 1989, 1990a, 1990b; Hamilton 1990). Germany therefore experience the messy nature of the transition process from the educational system to the labor market, lasting several years and being characterized by a high level of job insecurity, job experimentation, and frequent job change to a far lesser degree (Hamilton 1989). Hence, compared to the findings of Oppenheimer (1989) for the United States, stopgap employment should only be of minor importance for the German unskilled service work and mobility out of unskilled service jobs to career and career entry jobs should be rare.

The main question for the German service proletariat will therefore be, whether or not the mobility patterns of unskilled service workers do in fact differ from the mobility patterns of unskilled manual workers and unskilled commercial and administrative workers. This is to say, whether we must in fact add a "fordist" and "post-fordist" division of work to the basic division of unskilled and skilled work in Germany.

Finally, in understanding unskilled service jobs it is important to differentiate between men's and women's work (Blossfeld 1987a). According to Beck-Gernsheim and Ostner (1978), the division of labor into male and female occupations is based on a matching process of sex-specific interests and company-specific strategies of employment. They argue that women interested in employment tend to prefer occupations in which they can use already acquired skills, such as support, care, education, and empathy for the needs of others. Consequently, female job choices tend to be concentrated on activities in the service field. Because these sex-specific occupational aspirations are anchored not only in subjective dispositions but also in firm-specific employment interests, occupational decisions create a very stable process of sex-specific occupational selection. Beck-Gernsheim (1976)



therefore predicts that the proportion of women will increase in those occupational fields where, as a consequence of technical innovation and occupational change, the contents and modes of operation are closer to the "female culture." Therefore, the more household activities and household services are integrated into the market process (Willms-Herget 1985), and the more new jobs are created in the service economy, the more the occupational structure of each younger cohort of women will shift away from manual occupations to the new service jobs.

Compared with men, however, women are also assumed to be not only more willing to start their working life in hierarchically lower jobs (because of their lower levels of educational attainment and lower career and competitive orientations), but they are also assumed to be found more frequently in secondary labor market jobs, especially dead-end service jobs, as a consequence of sex-specific discrimination (Beck-Gernsheim 1976).

Based on these theoretical perspectives on the service proletariat, the goal of the following empirical analysis is to assess the following: (1) to what degree men and women from successive birth cohorts enter unskilled service jobs; (2) to what extent this entry pattern is connected with the specific structure of the German educational system; (3) whether the proportions of unskilled service workers is stable over the later job career for men and women from different birth cohorts; and (4) what type of mobility occurs between the unskilled service jobs and other occupational groups, i.e. whether the service proletariat can be considered as a new class.

### 3. Data bases and classifications

Our empirical description of the service proletariat in Germany is based on two data sources: (1) the German Life



History Study (see Mayer and Brückner 1988) carried out between October 1981 and May 1983 and sponsored by the Max Planck Institute for Human Development and Education in Berlin; and (2) the German Socio-economic Panel (Krupp 1985; Hanefeld 1987) based at the German Institute for Economic Research in Berlin for which the first wave took place in 1984.

The German Life History data includes information from 2,171 German respondents from the cohorts of 1929-31, 1939-41, and 1949-51. This sample is representative of the native-born German population of the former Federal Republic of Germany (Blossfeld 1987b). Each respondent was interviewed about his or her life history up until the time of the interview. Job, family, schooling, and residential histories were covered. The questionnaire registers all events in these life domains using a month as the time unit. That is, the respondents were asked, for example, to date each of their jobs by the month and year in which the job began and ended. With this data-set we can continuously reconstruct the educational and occupational histories of these cohorts up to the beginning of the 1980s.

While, in principle, this data set can be used to assess the importance of a service proletariat in Germany, the success of such a description depends largely on the selection of the cohorts studied. Hence, we have also used the Socio-economic Panel to obtain information about the specific positions of the three birth cohorts (1929-31, 1939-41, and 1949-51), and long-term trends in educational and occupational developments. One can also extend the description of the occupational histories of the German Life History's birth cohorts with the data of the Socio-economic Panel over the 1980s.

The aim of the Socio-economic Panel is to produce a representative longitudinal data base for the Federal Republic of Germany to be used in the analysis of a broad range of socioeconomic questions. Analyses in this paper refer to data

on German respondents from the panel waves between 1984 and 1988 because occupational histories of foreigners have a high percentage of missing values and the first job is difficult to interpret. In the first wave, 12,245 persons from 5,921 households were questioned. There is extensive methodological literature on the German Socio-economic Panel (see, e.g. Hanefeld 1987; Rendtel 1988, 1989).

The German Socio-economic Panel has the advantage that it provides representative information about first jobs and selected parts of job histories in the 1980s for a broad range of birth cohorts. We can therefore study the process of occupational change over a period of about fifty years. The oldest cohort included were born between 1926 and 1930 and entered the labor market in the 1940s, during a period of great turbulence generated by the Second World War. The youngest cohort included were born between 1956 and 1960 and entered the labor market in the 1980s, during a period of high educational expansion and economic uncertainty. In between we find cohorts which profited from the German Wirtschaftswunder and suffered from the economic recession in the late 1970s and 1980s.

### Classification of Education

For the purpose of analysing the service proletariat, it is sufficient that education reflects the basic levels of the German educational system. Therefore, we have only distinguished the following three educational groups: (1) people without vocational training - those only with lower secondary school certificates or intermediate school certificates and who have not completed any type of vocational training; (2) people with vocational training, Master Craftsman or technical qualification - this group consists of people who have in addition to a lower secondary school or their intermediate school certificate completed some form of



vocational training, or attained the Master Craftsman or technical qualification level; and (3) people with Abitur, Professional College Degree, or University Degree - this group comprises people with all higher educational degrees beginning with the upper secondary school certificate ("Abitur" or "Fachabitur").

### Classification of Occupations

In the German Life History Study and the German Socio-economic Panel, all occupational data were recorded on the basis of a self-assessment by the respondent. One can use the information about occupation as a rough indicator of the job-quality (Sorensen and Blossfeld 1989), skill requirements (Blossfeld 1989), responsibilities (Wright 1983; Goldthorpe 1980), and work-tasks of individuals. In the German Life History Study and the German Socio-economic Panel, the occupational data were coded on the basis of the international system for the classification of occupations (ISCO). For the purpose of describing the trend towards a post-industrial society, we aggregated these ISCO-codes into twelve occupational groups (see Table 1) along two dimensions: (1) the authority/skill-dimension of the job; and (2) the sector-activity-dimension of the job. The process of occupational classification is described in detail in an earlier study (Blossfeld 1983).

This classification is not a class scheme, but has in the past proven to be a valuable heuristic device for studying changes in the post-industrial division of labor (Blossfeld 1985, 1989; Blossfeld and Mayer 1988; Blossfeld and Becker 1989; Hannan, Schömann, and Blossfeld 1990). It also has the advantage that the results presented in this paper can be compared with earlier analyses on sex-specific employment, careers, education, and income. With this occupational classification we can observe job shifts between unskilled, skilled and highly skilled positions as well as job shifts



between activities pertaining to agriculture, production, administration, and services. Previous experience with this classification shows that jobs treated as having low skill standards include all those which, according to the theory of dual labor market, belong to the secondary labor market segment (Blossfeld and Mayer 1988). The occupational groups summarized under the heading "services" are more or less identical with Esping-Andersen's (1991) "post-industrial" (or "post-fordist") occupational groups. In addition, our classification allows us to assign the "industrial" or "fordist" occupations to the fields of "administration" and "production". In summary, our occupational classification allows us to describe the quantitative importance of the service proletariat and can be used to assess the question of whether the service proletariat has a typical pattern of job mobility between a larger number of occupational categories.

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Insert Table 1 about here  
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#### 4. Results

##### Entry into first job

We will begin our analysis with a description of intercohort changes in the first jobs for men and women. Table 2 shows a clear sex-specific pattern of entry into first employment for all birth cohorts. Men are centered around production occupations and women around service and administrative occupations. Across cohorts, women show a greater movement into the tertiary sector. For men employment in the production sector declines from about 76% (cohort 1926-30) to about 67%

(cohort 1951-55)<sup>1</sup>, while for women, this occupational field decreases from about 36% (cohort 1926-30) to about 16% (cohort 1951-55). Conversely, for the same cohorts, women show an increase in service and administrative positions of 7.7 percentage points and 12.2 percentage points, respectively; for men we observe an increase of 6.8 percentage points and 2.3 percentage points.

Table 2 also highlights that the shift across cohorts from relatively unskilled production and service jobs to skilled service and administration occupations at entry into the labor market takes place for both sexes is more pronounced for women. Thus, at entry into the occupational system, the occupational chances of women relative to those of men improve across cohorts. This change in women's occupational chances corresponds to an obvious decline in the proportion of unqualified women (Blossfeld 1989). The declining disadvantage of women at entry into the job market may thus be closely connected with the improvement in education across cohorts (Blossfeld 1987a).

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Insert Table 2 about here  
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The results in Table 2 are more in accordance with Bell's prognosis than with that of Braverman, at least as regards first entry occupations. Bell predicted that more technical and specialized knowledge would be required of working people as we enter the post-industrial society. The growth of unskilled jobs, which Braverman expected, and which was to have led to a polarization of the occupational structure, has not occurred, at least not for new entrants.

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<sup>1</sup> The 1956-60 cohort is not comparable because, in 1988, the year of the last available panel wave, many men were still attending college or university.



If we look specifically at the unskilled service jobs, then we observe a more or less constant proportion of about 3-5% for men and a declining proportion (from about 19% to about 10%) for women. Hence, as far as entry into the labor market is concerned, we cannot say that this group would become increasingly important as regards Germany's development towards a post-industrial society.

### Occupational career

Next, we consider whether the proportions of unskilled service workers show a decreasing, increasing or stable development across the job career for men and women from different birth cohorts. Figures 1 - 6, describe the educational and occupational career of men and women from three birth cohorts and are based on a combination of the German Life History data and the German Socio-economic Panel data. The German Life History data are used to describe the educational and occupational careers of the cohort 1929-31, 1939-41, and 1949-51 until 1981, this is to say up to the ages 50, 40, and 30, respectively. The German Socio-economic Panel data are used to extend these graphs up to the ages 57, 47, and 37, respectively, to cover changes in the 1980s.

In each of these six figures, age is depicted on the x-axis. For every month, we counted the distribution of states within the educational and occupational system as well as relevant types of non-employment (family work, unemployment, and retirement).<sup>2</sup> Then we cumulated these proportions for each

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<sup>2</sup> We distinguish among the following states: HS = Lower secondary school ("Hauptschule"); MR = Middle school; AB = Upper secondary school; BO, BA = Vocational training; UN= University; AGR = Agricultural occupations; EMB = Unskilled manual jobs; QMB = Skilled manual occupations; TEC = Technicians; ING = Engineers; EDB = Unskilled service jobs; QDB = Skilled service occupations; SEM = Semiprofessions; PROF = Professions; EVB = Unskilled commercial and administrative jobs;



month and joined the points to get a picture of the changes of the distribution over the life course.<sup>3</sup> Thus it is possible to use the x-axis to trace all transitions between different parts of the educational and occupational system in terms of net changes and to compare job structures across cohorts and between the sexes.

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Insert Figure 1 about here  
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As an example of how to read the cumulative figures, let us first examine the educational and occupational history of men born between 1929 and 1931 (Figure 1). The figure shows that at the age of 10 years, 79% of these men were attending a lower secondary school (HS), 11% were in a school that led to a middle school certificate (MR), and 10% were attending upper secondary school (AB). The figure then shows how this cohort gradually left the general educational system. Thus, almost all the lower secondary school pupils had left school by about the age of 15, middle school students left school between the ages of 16 and 17, and the school leaving age for most of the upper secondary school students was between 18 and 20 years. A small number of men between the ages 14 and 20 had begun vocational training but did not complete it (BO). The highest percentage of men who also completed vocational training (BA) was 46% at age of 17. Finally, 8% to 10% of these men attended university between the ages of 19 and 28 (UN).

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QVB = Skilled commercial and administrative jobs;  
MAN = Manager; WZ = Unemployment; WF = Family work;  
PEN = Retirement; KA = Unknown.

<sup>3</sup> We only give educational and occupational histories for individuals who, during the time of observation in the German Life History Study or the German Socio-economic Panel, held at least one occupation.

A more careful scrutiny of the distribution of this cohort at the age of 16 also shows that 18% were in the general school system, and 42% were in the vocational training system. The remainder had already left the educational system. Most of these were working in agriculture (15%) (AGR), unskilled manual occupations (5%) (EMB), and unskilled service jobs (2%) (EDB). The direct transition from the educational system to the employment system (i. e. without vocational training) that occurred in the immediate postwar period was thus associated with entry into unskilled or agricultural jobs. In addition, a large percentage of persons of this age were not employed (WZ) due to the consequences of the war (displacement, imprisonment, unemployment, etc.).

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Insert Figure 2 about here  
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Let us now compare the educational and occupational careers of men and women born between 1929 and 1931 at the ages of between 9 and 57 (Figures 1 and 2). It is easy to see on average men leave the general educational system later than women because they are more likely to attend upper secondary school. Men are also more often enrolled in vocational training. For example, at age 17, the proportion of women who attend vocational training programs is about 20%, while the corresponding figure for men is about 46%. Women of this cohort, therefore entered the labor market earlier than men (45% as against 31%). At this age, both sexes are primarily working in unskilled occupations (women: 39%; men: 24%). Compared to men, women had also more frequent non-employment experiences - both because of unemployment (WZ) (women: 15%; men: 7%), and because of family work (WF) (women: 4%; men : 0%). Employment interruptions, influenced by the events of World War II, lasted until about the age of 20.

What then are the differences in the later occupational career between men and women in the 1929-31 cohort? At first, within the unskilled occupations, the relatively high level of employment accounted for by agriculture (which absorbed between 16% and 18% of both men and women between ages 16 and 20) decreases to about 2% or 3% at age 57. Thus immediately after the Second World War, agriculture served as a collecting vessel for many unemployed people, but later lost workers primarily because of the decline in this sector.

There are also marked differences between the occupational courses of men and women in other unskilled occupations. Particularly interesting in this respect are the unskilled service jobs. Their proportion is shaded in Figures 1 to 6 to make it easier to follow their percentage across the life course. The proportion of men in unskilled service occupations rises continuously up to the age of 40 and then stabilizes at a relatively high level of about 14%. These means three things: (1) unskilled services are not youthful stopgap jobs because the percentage should then be high in younger ages and subsequently decrease; (2) unskilled services are not very important for the elderly because the percentage should then rise at higher ages, say after the age of 50; (3) unskilled jobs are attractive for middle-aged workers, coming from other jobs. Later on in this paper we will show in more detail from which occupational groups these middle-aged workers come. As far as women in unskilled service jobs are concerned, their proportion at first increases to a level of about 17% at the age of 19 and then decreases to a level of about 8% at age 30. It seems that women in this occupational group interrupted employment particularly because of family work. This point will be made clearer in later steps of the analysis.

The situation in skilled occupations is completely different. The skilled occupations rank foremost for men, and within this occupational group, skilled manual occupations and technicians are not very important for women. The development of skilled



services is stable across the ages for both sexes with a proportion of 3 - 5%. The proportion of men in skilled commercial and administrative occupations continuously increased to 12%, whereas that of women oscillated between 3% and 6%, owing to employment interruptions caused by family work. Finally, professions, managers, and engineers were also the domain of men. After about age 28, roughly 8% of all men were managers, engineers, or professionals. Women of this cohort are almost completely absent from these occupational group and are found mostly in semiprofessions at a relatively constant level of 2 - 3%, beginning at about age 23.

On the basis of the expansion of technical, skilled commercial, administrative, and managerial occupations, there can be no doubt that occupational promotion is more frequent for men over the life course. Over the observed occupational course, we cannot see such an expansion of relatively skilled occupations for women. Their occupational development is characterized by employment interruptions due to family work; these reach a climax at age 33 with a proportion of 58% and decrease slowly as age increases.

If we summarize the educational and occupational history of the 1929-31 cohort, then we can say that its course was strongly marked by the specific historical conditions at entry into the labor market. The postwar situation affected both participation in education and the point of entry of cohort members into the occupational system. Specifically, the consequences were a low rate of participation in education, early entry into unskilled jobs, and an extremely high entry into farm jobs. The mark left by these factors on the life chances of this generation did undergo some adjustment as a result of worklife mobility processes (increase in the proportion of technicians, semiprofessions, and persons in skilled commercial and administrative occupations). However, the basic structure (high proportions in unskilled manual occupations and unskilled service jobs) persisted in so far as

there were only negligible changes in the intragenerational occupational structure after the 30th year. Thus, for this cohort the specific historical conditions surrounding the period of transitions from education to employment reflected typical educational and occupational career patterns. This is especially evident in a comparison of the respective educational and occupational careers of 1939-41 and 1949-51 cohorts (Figures 3 to 6).

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Insert Figures 3 to 6 about here  
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In comparing Figures 3 - 6, one striking result is that each younger cohort had better educational opportunities and on average spent more years in general education. Vocational training began to be an increasingly frequent phenomenon between the general educational system and first job. And finally, the number of students in colleges and universities increased.

In addition, the "economic miracle" in the late 1950s and early 1960s and the considerable expansion of the welfare state in the early 1970s influenced both initial occupational choices and subsequent careers. This is evident from a comparison of the occupational distributions of the three cohorts. Across cohorts, the proportion of people employed in unskilled occupations is declining and the proportions of people in the skilled and highly skilled jobs is increasing. Thus younger cohorts more rapidly attained larger relative proportions of the skilled and the advanced positions although they usually spent more time in the educational system. Because of their longer education each younger cohort had better chances for entering the new, more skilled, occupations created by changes in the occupational structure (in the wake of the economic boom and expansion of the welfare state). In addition, there seem to have been a very low level of



compensation in later careers for the effects of the historical conditions surrounding the entry of these cohorts into the employment system, as evidenced by the relatively stable occupational structures of the cohorts after the age of 30. Thus a handicap suffered by a cohort cannot be made up for later; once acquired, an advantage by a cohort remains through the years.

Finally, if we compare the development of the proportion of unskilled service jobs across cohorts, it is obvious that for all ages this proportion declines for both men and women. Again, the basic pattern over the life course differs for men and women of younger birth cohorts. For men, this proportion continuously increases until middle-age and then stabilizes, while for women, it increases up to the age of around 20 and then decreases.

#### Entry into the labor market and vocational training

As discussed in the theoretical section, there are several studies which show that the German educational system leads to a strong differentiation between unskilled and semi-skilled workers on the one hand and the occupationally trained workers on the other. Thus, we examine the question of how employees with varying vocational qualifications are related to the various occupational groups, and especially to the unskilled jobs, at their point of entry into the employment system, that is, upon entry into their first job.

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Insert Table 3 about here  
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Table 3 shows that the majority of workers with no vocational qualification (78.9%) enter unskilled jobs, only 21.1% enter skilled jobs and none enter highly skilled jobs. Of those with

a vocational, 65.9% enter the labor force in skilled jobs, 1.3% in highly skilled jobs, but 32.8% are employed in unskilled jobs. This pattern concurs with Hofbauer's (1983) finding that a significant fraction of workers with vocational qualification are subsequently employed in unskilled jobs. The most highly qualified employees are almost exclusively employed in skilled (57.3%) or highly skilled (30.9%) jobs. Table 3 thus verifies the thesis that qualifications acquired in the vocational training system have great significance for entry opportunities into the West German labor market and themselves serve to segment the market - at least so far as entry into the occupational system is concerned.

If we now take a closer look at the unskilled services in Table 3, then we see that most of the individuals who enter the labor market without vocational training are employed in this group (28.6%), while the chance to enter unskilled service jobs is very small for beginners with vocational training (6.5%) and Abitur, Professional College Degree or University Degree (3.5%). Entry into the service proletariat in Germany is therefore especially closely linked with having no vocational training.

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Insert Table 4 about here  
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However, the importance of vocational training actually increases throughout the job career, as shown in Table 4. In this table, highest vocational training and the type of employment at the beginning of the year 1988 (the year of the last available wave from the Socio-economic Panel) is cross-classified. For the people with vocational training the proportion working in unskilled jobs (32.7%) is about the same as for the first job (32.8%) and the proportion of people with Abitur or higher educational qualifications decreases from 11.8% to 7.4%. Even if some people without vocational training



manage to move up to skilled jobs (the percentage increases from 21.1% to 33.0%) and highly skilled jobs (the percentage increases from 0.0% to 1.4%), more than 65% still work in unskilled jobs.

If we compare Tables 3 and 4, we can observe that as regards unskilled jobs, only one occupational group increases over the career: unskilled service jobs (from 10.1% to 14.4%). We also observe that the percentage of people without vocational training increases further for this occupational group. This means there is an increasing accumulation of unqualified workers across the career. However, the percentage of individuals with vocational training has also risen in unskilled service jobs over the working life (from 6.5% to 13.4%).

#### Job mobility between occupational groups

Let us now consider the question of how mobility between the occupational groups develops over the job career. Does the service proletariat in Germany form new social class by sharing a specific labor market position, i. e. a typical pattern of job mobility between a larger number of occupational categories? Table 5, which shows the opportunities to move from first job to the job at the beginning of the year 1988 tries to give an answer to this question.

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Insert Table 5 about here  
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First, Table 5 reveals a quite uniform pattern along the main diagonal: the more skilled the occupational group, the greater

the tendency to be immobile. Thus, for unskilled jobs we find that between 38% and 57% of the individuals remain stable, for the skilled jobs these proportions are between 52% and 77%, and for the highly skilled jobs the proportions are between 71.7% and 85%. In general, mobility between each of the unskilled, skilled and highly skilled occupations is quite high and mobility across these occupational skill barriers is low.

We also observe a high degree of interchange between technicians and engineers, between semiprofessions and professions, and between skilled commercial and administrative occupations and managers. Esping-Andersen's division between "fordist" and "post-fordist" jobs seems therefore to make sense for the skilled and highly skilled positions.

However, if we look at the unskilled jobs then the mobility pattern is less structured along the "fordist"- "non-fordist"-division of labor. People starting out in unskilled jobs end up at very diverse occupational destinations. Most of them move to other unskilled jobs. As far as unskilled service jobs are concerned, they are the preferred destination of people starting out in agricultural jobs (21.4%) and unskilled manual jobs (21.0%). The percentage of people starting out in unskilled commercial and administrative jobs and then moving to the unskilled service jobs is again quite high (15.6%). Conversely, people who started their working life in unskilled service jobs to a large extent end up in unskilled manual jobs (7.9%) and unskilled commercial and administrative jobs (9.1%), even if the proportion of these occupational groups is declining across cohorts and over the working life.

In Germany, unskilled service jobs again prove not to be "youthful stopgap jobs" because the proportion of people who had their first employment in this job and then stay is the highest (57.8%) among the unskilled jobs (agricultural



occupations 44.7%, unskilled manual occupations 38.9%, and unskilled commercial and administrative jobs 43.9%). The percentage of people starting their career in unskilled service jobs and then moving to skilled and highly skilled jobs is smallest among the unskilled occupations (24.6%) (with the exception of agricultural occupations at 19.4%). Thus, in Germany the great majority of unskilled service leavers does not move to career or career-entry jobs as was postulated by the "youthful-stopgap-job-thesis" (Oppenheimer 1989). Instead, in Germany service jobs seem to be part of a pool of secondary jobs and people who enter these jobs at the beginning of their career are to a large extent confined in their mobility to unskilled service jobs and other unskilled job categories. Table 5 also shows, that the percentage of unemployed people (with 10.3%) among the people who begun their career in unskilled service jobs is the highest compared to all occupational groups (again with the exception of agricultural occupations: 10.4%). Finally, the unskilled service jobs are to a large extent women's jobs. This can be seen in the exceptionally high percentage of beginners in unskilled service jobs which have left the labor force to do family work during the time of the interview in 1988 (44.6%) (Table 5). This figure underlines earlier findings (see Figures 1 - 6): many (unqualified) women are increasingly employed in unskilled service jobs around the age of 20 and then move out of these jobs to do family work.

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Insert Table 6 about here  
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Because unskilled service jobs are a growing job category over the life course - with a declining percentage across birth cohorts - we should finally answer the question from which occupational groups these employees come. Table 6 gives the

composition of unskilled service workers at the beginning of 1988 by first job. We observe that most of these workers come from "fordist" jobs. Manual workers account for the greatest share (44.5%). The proportion which first worked in skilled manual occupations is very high (33.7%) and is the strongest group within the unskilled service workers. This means that there is a close relationship between manual occupations and unskilled service jobs in terms of mobility. This clearly is not in accordance with Esping-Andersen's thesis that manual workers and unskilled service workers have very little in common. The opposite is true. Unskilled service jobs and unskilled manual jobs are very closely inter-connected (see Table 6).

#### 5. Summary and conclusion

The purpose of this paper is to give an answer to the question of whether or not there is a new quantitatively significant service proletariat emerging in the Federal Republic of Germany which is mutually differentiated in its labor market chances from the traditional worker's proletariat, and trapped into a vicious cycle of underprivilege over the life course.

Our analysis shows that, across cohorts, there is a more or less constant proportion (about 3 - 5%) of men and a strongly declining proportion of women (from about 19% - 10%) who entered an unskilled service job as the first job. Across cohorts, also the percentage of men and women employed in unskilled service jobs at each age is declining. Thus we cannot say that this occupational group would become increasingly important as Germany moves towards a post-industrial society.

There is, however, an important and sex-specific employment pattern in unskilled service jobs over the life course. For



men, the proportion in unskilled service jobs rises continuously from the school-leaving age up to the age of about 40, and then stabilizes. These means three things: (1) unskilled service jobs in Germany are not youthful stopgap jobs because the percentage should then be high in younger ages and subsequently decline; (2) unskilled service jobs in Germany are obviously less important for elderly workers because the percentage of employment in these jobs should then rise at higher ages; and (3) unskilled service jobs in Germany constitute a collecting vessel for middle-aged workers coming from other - frequently declining - occupations. For women, we find a different pattern across the life course. Their proportion at first increases from the school-leaving ages to their early twenties and then decreases. This means that women in this occupational group interrupted particularly their employment due to family work.

The "youthful stopgap job" argument not does apply in the case of Germany because: (1) the proportion of people who found their first employment in an unskilled service job and then did not change is highest (57.8%) among unskilled jobs (agricultural occupations 44.7%, unskilled manual occupations 38.9%, and unskilled commercial and administrative jobs 43.9%); and (2) the percentage of people starting their career in unskilled service jobs and then moving to skilled and highly skilled jobs is smallest among the unskilled occupations (24.6%) (with the exception of agricultural occupations at 19.4%). Thus, in Germany the great majority of unskilled service leavers does not move to career or career-entry jobs as was postulated by the "youthful-stopgap-job-thesis" (Oppenheimer 1989). Instead, in Germany service jobs seem to be part of the secondary labor market and people who enter these jobs at the beginning of their career are to a large extent confined in their mobility to unskilled service jobs and other unskilled job categories. It has been also shown that this division between unskilled and skilled jobs is to a great extent based on the specific structure of

vocational training system in Germany. Vocational training certificates are not only important for entry into the labor market, but their importance continues throughout the job career.

Even if Esping-Andersen's (1991) division between "fordist" and "post-fordist" jobs seems to make sense for the skilled and highly skilled positions, we could not find a mobility pattern that would be structured along the "fordist"-non-fordist-division of labor for the unskilled jobs. People starting out in unskilled jobs end up at very diverse occupational destinations. Most of them move to other unskilled jobs. As far as unskilled service jobs are concerned, they are the preferred destinations of people starting out in agricultural jobs (21.4%), and unskilled manual jobs (21.0%). Moreover, the percentage of people starting out in unskilled commercial and administrative jobs and then moving to the unskilled service jobs is quite high (15.6%). Conversely, people who start their working life in unskilled service jobs to a large extent end up in unskilled manual jobs (7.9%) and unskilled commercial and administrative jobs (9.1%).

We also observed that the greatest share of workers employed in 1988 in unskilled service jobs (44.5%) were originally manual workers. In particular, the proportion of people who first worked in skilled manual occupations is very high. This group (33.7%) is the strongest within the unskilled service workers. This means that there is a close relationship between manual occupations and unskilled service occupation in terms of mobility. This clearly is not in accordance with Esping-Andersen's thesis that manual workers and unskilled service workers have very little in common. The opposite is true. Unskilled service jobs and unskilled manual jobs are very closely inter-connected.

On the basis of these results, we must conclude that there is



no new specific service proletariat emerging in Germany. The mobility pattern for the service proletariat does not appear to differ qualitatively from that of other unskilled "fordist" groups and the service proletariat does not constitute an absorbing state with only few exits. Under these conditions, it is certainly highly unlikely that the service proletariat would become a thoroughgoing context for adult socialization and for differential allocation of socioeconomic and personal welfare, and thus, for a social class.

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Figure 2: Educational and occupational history of women (Birth cohort 1929-31)

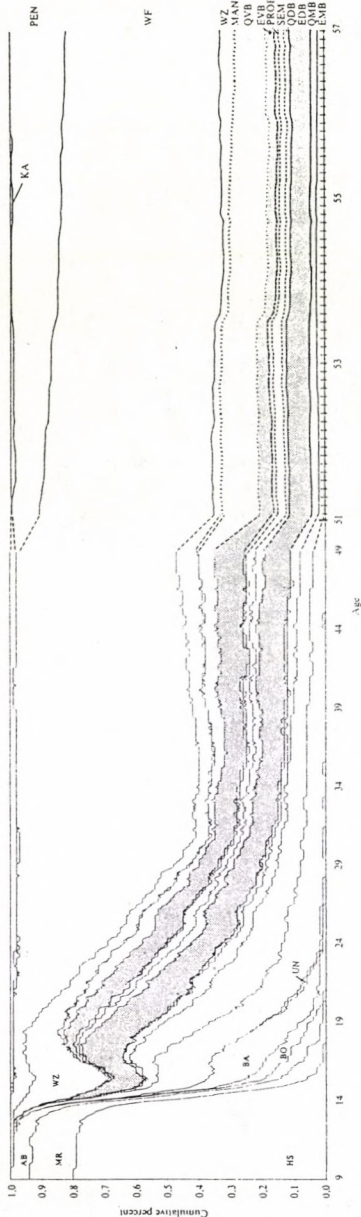


Figure 1: Educational and occupational history of men (Birth cohort 1929-31)

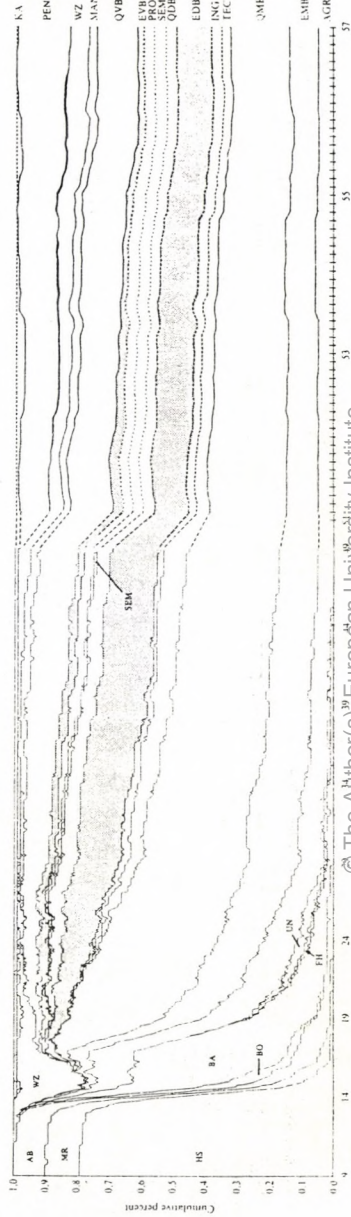


Figure 4: Educational and occupational history of women (Birth cohort 1939-41)

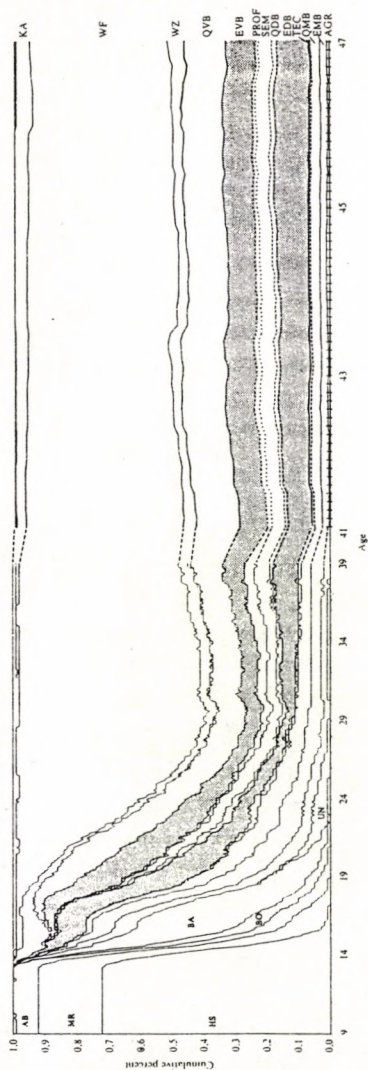


Figure 3: Educational and occupational history of men (Birth cohort 1939-41)

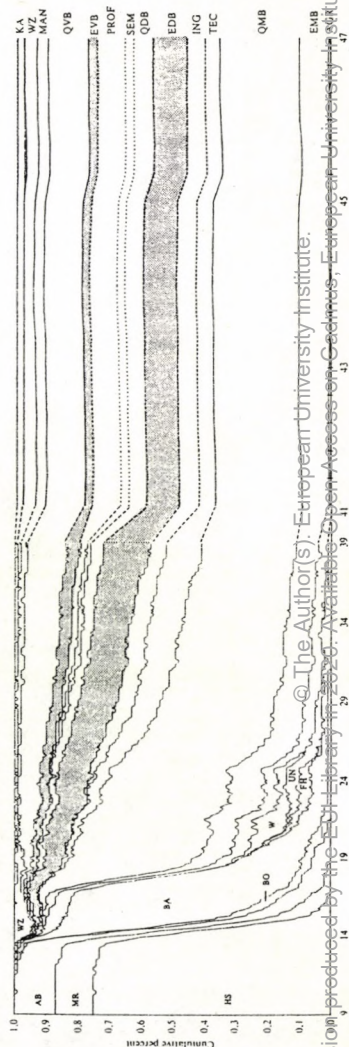




Figure 4: Educational and occupational history of women (Birth cohort 1949-51)

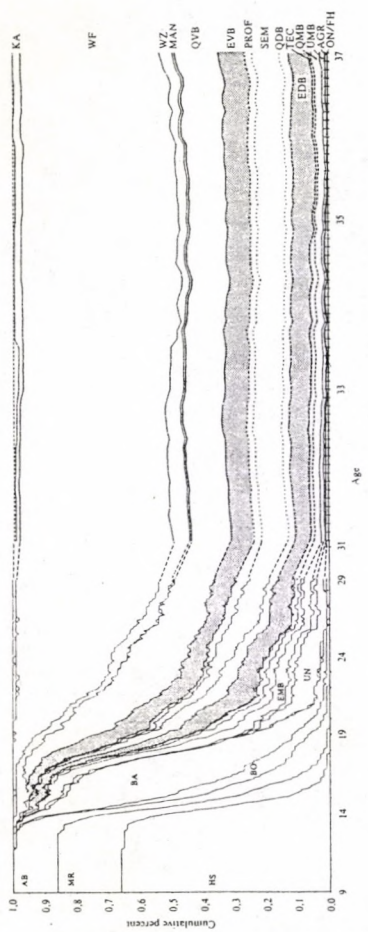


Figure 5: Educational and occupational history of men (Birth cohort 1949-51)

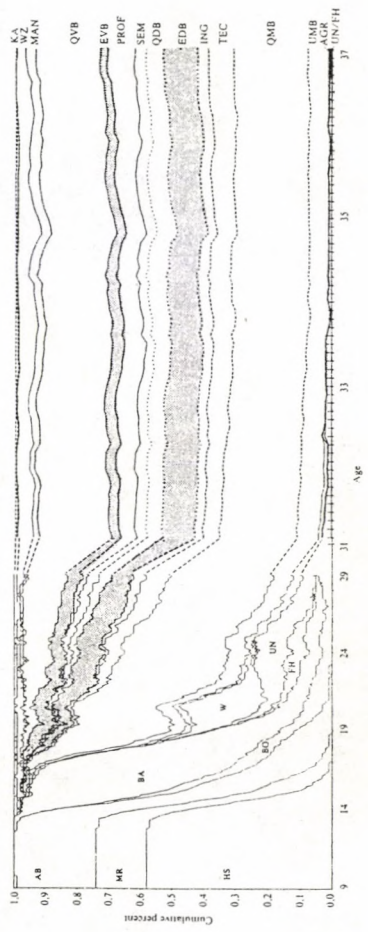


Table 1: Classification of the Occupations

Name of the occupational group	Description of the occupational group	Composition of the occupational groups according to the German occupational classification (I970)	Composition of the occupational groups according to the international classification of occupations (ISCO)	Examples
<b>Production</b>				
<b>Agricultural occupations (AGR)</b>	Occupations with a dominant agricultural orientation	011-032,041,051,053,062	6-11 to 6-49	Farmers, agricultural workers, gaidenets, workers in the forest economy, fishermen, etc.
<b>Unskilled manual occupations (EMB)</b>	All manual occupations that showed at least 60 percent unskilled workers in 1970	071-133,135-141,143,151-162,164, 176-193,203-213,222-244,252,263, 301,313,321-332,332-346,352-371, 373,375-377,402-403,412,423-433, 442-452,463,465-472,482,486,504, 512-531,543-549	3-9,2,7-11 to 7-23,7-26 to 7-34,7-51 to 7-61,7-71,7-72,7-74,7-75,7-77,7-79 to 7-89,7-93 to 7-95,7-99,8-02,8-12,8-20,8-35,8-39,8-72,8-91 to 9-01, 9-10,9-25,9-29,9-42 to 9-49,9-52,9-53,9-56,9-59,9-69,9-72 to 9-74,9-82, 9-99	Miners, cockbreeders, papermakers, wood industry occupations, printing industry occupations, welders, riveters, unskilled workers, road and railroad construction workers, etc.
<b>Skilled manual occupations (QMB)</b>	All manual occupations that showed at most 40 percent unskilled workers in 1970	134,142,144,163,167,175,201-202, 217-251,262-282,290-291,302,305-312,315-317,319,320,322,324,326, 401,411,421-422,441,451,464-481, 483-485,491-503,511,541,542, 803,304,621-635,721-722,733,857	7-41 to 7-49,9-02,9-26 to 9-31,7-24, 7-25,8-31 to 8-34,7-81,7-83 to 8-80, 9-1,9-7,9-9,9-10,9-11,9-16,9-17,9-18,9-19, 6-2,9-2,9-7,9-11,9-12,9-13,9-14,9-15, 54,9-55,9-57,9-56,8-11,8-19,9-61, 9-62,9-63,9-64,9-65,9-66,9-67, 84,9-27,0-42,0-43,0-62,0-66,0-69	Glassblowers, bookbinders, typesetters, locksmiths, precision instrument makers, electrical mechanics, cooper, brewers, carpenters, etc.
<b>Technicians (TEC)</b>	All technically trained specialists	032,052,601-612,726,883	0-21 to 0-31,0-11 to 0-13,0-82,0-83, 0-41,0-51 to 0-53	Machinery technicians, electrical technicians, construction technicians, mining technicians, etc.
<b>Engineers (ING)</b>	Highly trained specialists who solve technical and natural science problems	685-686,688,706,713-716,723-725, 741-744,791-794,805,838,911-913, 923-937	4-52,4-90,3-59,9-81,9-85 to 9-89,3-91,9-71,9-79,5-89,5-51,5-92,1-75, 1-80,3-94,5-40,5-10,5-32,5-40,5-52, 5-60	Construction engineering, electrical engineers, production designers, chemical engineers, physicists, mathematicians, etc.
<b>Service</b>				
<b>Unskilled services (EDB)</b>	All unskilled personal services	684,704-705,711-712,801-804,812, 814,831,837,851,852,854-857,892, 902,921-922	4-43,9-83,9-84,3-51,3-60,5-82,1-71, 1-63,0-79,0-76,0-72,9-9,1-49,5-70, 5-20,4-31,5-81	Cleaners, waiters, servers, etc.
<b>Skilled services (QDB)</b>	Essentially order and security occupations as well as skilled service occupations	821-823,853,861,864,873,877	4-43,9-83,9-84,3-51,3-60,5-82,1-71, 1-63,0-79,0-76,0-72,9-9,1-49,5-70, 5-20,4-31,5-81	Police, firemen, locomotive engineers, photographers, hairdressers, etc.
<b>Semiprofessions (SEM)</b>	Service positions which are characterized by professional specialization	811,813,841,844,871-872,881-882, 891	1-51,1-59,1-79,1-91,1-93,1-95,0-71, 0-73,0-74,0-77,1-94,1-33 to 1-39	Nurses, educators, elementary school teachers, Kindergarten teachers, etc.
<b>Professions (PROF)</b>	All liberal professions and service positions which require a university degree	811,813,841,844,871-872,881-882, 891	1-21 to 1-29,0-61,0-63 to 0-65,0-67, 0-68,1-31,1-32,0-81,0-90,1-91,1-99, 1-41	Dentists, doctors, pharmacists, judges, secondary education teachers, university professors, etc.
<b>Administration</b>				
<b>Unskilled commercial and administrative occupations (FVB)</b>	Relatively unskilled office and commerce occupations	682,687,731-732,734,782,784,773	4-51,4-32,3-52,3-30,3-21,3-22, 3-99	Postal occupations, shop assistants, typists, etc.
<b>Skilled commercial and administrative occupations (QVB)</b>	Occupations with medium and higher administrative and distributive functions	031,681,683,691-703,771-772,774, 781	6-00,4-00 to 4-22,3-39,4-41,4-42,5-91,3-31,3-41,3-42,3-00,3-10,3-91, 3-95	Credit and financial assistants, foreign trade assistants, data processing operators, bookkeepers, goods traffic assistants, etc.
<b>Managers (MAN)</b>	Occupations which control the production as well as management of the enterprise			Managers, business administration, deputies, managers, social organization leaders, etc.



Table 2: Changes in the Structure of First Jobs for Men and Women From Successive Birth Cohorts (Percentages)

Sex	Occupational group	Birth cohort						
		1926-30	1931-35	1936-40	1941-45	1946-50	1951-55	1956-60
Men	<u>Production</u>	<u>76.2</u>	<u>82.5</u>	<u>81.2</u>	<u>70.8</u>	<u>69.1</u>	<u>66.9</u>	<u>75.0</u>
	Agricultural occupations	11.5	13.6	9.6	4.5	1.8	3.2	2.5
	Unskilled manual occ.	12.3	11.8	12.6	10.3	6.7	4.3	7.7
	Skilled manual occ.	48.8	54.8	55.2	49.4	53.5	50.0	57.8
	Technicians	2.2	1.8	2.2	4.5	5.7	7.2	4.8
	Engineers	1.4	0.5	1.6	2.1	1.4	2.2	1.2
	<u>Services</u>	<u>12.8</u>	<u>8.9</u>	<u>9.5</u>	<u>17.7</u>	<u>12.8</u>	<u>19.7</u>	<u>14.4</u>
	Unskilled services	3.1	2.7	3.6	4.5	1.8	5.4	7.7
	Skilled services	3.5	0.5	0.5	2.9	5.3	4.0	3.4
	Semiprofessions	1.8	2.0	0.8	2.5	1.4	3.5	0.9
	Professions	4.4	3.7	4.6	7.8	4.3	6.8	2.4
	<u>Administration</u>	<u>11.0</u>	<u>8.6</u>	<u>9.3</u>	<u>11.5</u>	<u>18.1</u>	<u>13.3</u>	<u>10.6</u>
	Unskilled commercial and administrative occupations	3.5	3.6	3.8	3.3	5.0	4.3	4.6
	Skilled commercial and administrative occupations	7.0	5.0	5.2	7.4	12.4	8.6	5.8
	Managers	0.5	0.0	0.3	0.8	0.7	0.4	0.2
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	227	221	366	243	282	279	583
Women	<u>Production</u>	<u>36.4</u>	<u>39.8</u>	<u>29.7</u>	<u>25.7</u>	<u>17.1</u>	<u>16.5</u>	<u>20.0</u>
	Agricultural occupations	11.7	7.6	5.3	1.1	1.5	0.7	2.2
	Unskilled manual occ.	13.8	19.1	15.0	13.0	5.8	5.5	4.8
	Skilled manual occ.	8.8	11.0	7.3	7.2	5.8	5.5	8.0
	Technicians	1.3	1.7	2.0	4.0	4.0	4.4	4.7
	Engineers	0.8	0.4	0.1	0.4	0.1	0.4	0.3
	<u>Services</u>	<u>35.1</u>	<u>36.2</u>	<u>36.0</u>	<u>29.5</u>	<u>45.9</u>	<u>42.8</u>	<u>38.4</u>
	Unskilled services	19.2	19.5	21.6	14.1	17.8	10.3	14.8
	Skilled services	4.6	4.4	5.0	5.1	10.0	12.7	10.1
	Semiprofessions	10.0	10.6	6.7	7.8	13.1	12.5	10.0
	Professions	1.3	1.7	2.7	2.5	5.0	7.3	3.5
	<u>Administration</u>	<u>28.5</u>	<u>24.0</u>	<u>34.3</u>	<u>44.8</u>	<u>37.0</u>	<u>40.7</u>	<u>41.6</u>
	Unskilled commercial and administrative occupations	15.8	16.8	19.3	24.9	21.2	22.0	23.3
	Skilled commercial and administrative occupations	12.7	7.2	15.0	19.5	15.8	18.7	18.3
	Managers	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	N	240	236	300	277	260	273	601

Table 3: Vocational Qualification and Entry into the Labor Market (First Job)

First job	All	Highest vocational qualification		
		No vocational qualification	Vocational Training or Master Craftsman	Abitur, Professional College Degree, or University Degree
<u>Unskilled jobs</u>	<u>38.0</u>	<u>78.9</u>	<u>32.8</u>	<u>11.8</u>
Agricultural occupations	5.6	13.8	4.3	1.3
Unskilled manual occupations	10.1	25.1	7.5	3.0
Unskilled services	10.1	28.6	6.5	3.5
Unskilled commercial and administrative occupations	12.2	11.4	14.5	4.0
<u>Skilled jobs</u>	<u>56.0</u>	<u>21.1</u>	<u>65.9</u>	<u>57.3</u>
Skilled manual occupations	30.1	11.5	39.9	13.3
Technicians	3.6	0.1	3.3	8.7
Skilled services	5.1	2.1	6.0	4.2
Semiprofessions	5.8	2.7	3.7	17.5
Skilled commercial and administrative occupations	11.4	4.0	13.0	13.6
<u>Highly skilled jobs</u>	<u>7.5</u>	<u>0.0</u>	<u>1.3</u>	<u>30.9</u>
Engineers	1.2	0.0	0.1	6.9
Professions	4.5	0.0	1.2	22.2
Managers	1.8	0.0	0.0	1.8
Total	100.0	100.0	100.0	100.0
N	3695	696	2376	623

Table 4: Vocational Qualification and Employment at the Beginning of 1988

Job at the beginning of 1988	All	Highest vocational qualification		
		No vocational qualification	Vocational Training or Master Craftman	Abitur, Professional College Degree, or University Degree
<u>Unskilled jobs</u>	<u>32.3</u>	<u>65.6</u>	<u>32.7</u>	<u>7.4</u>
Agricultural occupations	2.2	4.5	2.1	0.7
Unskilled manual occupations	7.5	13.9	8.0	1.4
Unskilled services	14.4	34.9	13.4	3.1
Unskilled commercial and administrative occupations	8.2	12.3	9.2	2.2
<u>Skilled jobs</u>	<u>56.2</u>	<u>33.0</u>	<u>63.5</u>	<u>48.9</u>
Skilled manual occupations	20.3	16.5	27.1	2.5
Technicians	4.8	0.8	5.6	5.1
Skilled services	5.6	2.9	6.5	4.7
Semiprofessions	6.4	1.3	4.0	17.4
Skilled commercial and administrative occupations	19.1	11.5	20.7	19.2
<u>Highly skilled jobs</u>	<u>11.5</u>	<u>1.4</u>	<u>3.4</u>	<u>43.7</u>
Engineers	3.4	0.3	0.6	14.1
Professions	5.6	0.8	1.1	23.1
Managers	2.5	0.3	1.7	6.5
Total	100.0	100.0	100.0	100.0
N	2708	375	1780	553



Table 5: Mobility From First Job to the Job at the Beginning of 1988 (Outflow proportions)

Job at the beginning of 1988	First job				Skilled jobs				Highly skilled jobs			
	AGR	UMB	EDB	EVB	QMB	TEC	QDB	SEB	QVB	ING	PROF	MAN
Unskilled jobs	80.6	57.7	75.4	60.6	25.7	5.8	18.1	6.2	11.8	0.0	0.0	0.0
Agricultural occupations	AGR	44.7	0.6	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unskilled manual occupations	UMB	12.6	38.5	7.9	1.1	7.6	2.9	4.3	0.0	0.0	0.0	0.0
Unskilled services	EDB	21.4	21.0	57.8	15.6	14.0	0.0	11.7	5.3	0.0	0.0	0.0
Unskilled commercial and administrative occupations	EVB	1.9	7.2	9.1	43.9	3.6	2.9	2.1	0.9	0.0	0.0	0.0
Skilled jobs	19.4	32.3	24.6	36.7	68.7	67.7	81.9	82.5	80.8	6.3	21.7	14.3
Skilled manual occupations	QMB	7.8	14.4	6.1	2.2	52.3	5.9	10.6	0.0	0.0	0.0	0.0
Technicians	TEC	2.9	4.8	1.0	1.7	5.4	55.2	0.0	0.0	0.0	0.0	0.0
Skilled services	QDB	1.9	3.0	4.2	1.7	4.5	0.0	60.7	1.8	0.0	0.0	0.0
Semiprofessions	SEM	0.0	0.0	4.2	4.4	1.0	0.0	3.2	73.7	1.2	0.0	0.0
Skilled commercial and administrative occupations	QVB	6.8	10.1	9.1	26.7	5.5	5.9	7.4	77.5	0.0	6.6	14.3
Highly skilled jobs	0.0	0.0	0.0	2.7	5.6	26.5	0.0	11.3	7.4	23.7	78.3	85.7
Engineers	ING	0.0	0.0	0.0	2.9	13.2	0.0	0.0	1.6	84.4	0.9	0.0
Professions	PROF	0.0	0.0	0.0	1.3	5.9	0.0	11.3	1.7	3.3	71.7	0.0
Managers	MAN	0.0	0.0	0.0	1.4	7.4	0.0	0.0	4.1	6.0	5.7	85.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	103	167	165	180	777	68	94	114	246	32	106	7
Unemployment at the beginning of 1988 1)	10.4	6.2	10.3	6.3	5.0	2.8	5.1	3.4	3.9	0.0	1.0	0.0
In the family at the beginning of 1988 2)	25.9	31.6	44.6	46.1	5.4	26.0	38.2	38.0	25.2	3.0	10.9	0.0

1) As a proportion of the number of people employed and unemployed at the beginning of 1988.

2) As a proportion of the number of people employed and in the family at the beginning of 1988.

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Table 6: Mobility into the Job at the Beginning of 1988 from the First Job (Inflow Proportions)

First job	Job at the beginning of 1988				Skilled jobs				Highly skilled jobs			
	Unskilled jobs											
	AGR	UMB	EDB	EVB	QMB	TEC	QDB	SEM	QVB	ING	PROF	MAN
<u>Unskilled jobs</u>	22.7	57.8	55.7	69.8	9.8	14.2	14.7	11.6	25.1	0.0	0.0	11.1
Agricultural occupations	88.5	8.1	6.8	1.4	1.7	1.0	1.7	0.0	2.0	0.0	0.0	0.0
Unskilled manual occupations	UMB	1.9	40.4	10.8	5.1	8.2	4.3	0.0	4.9	0.0	0.0	0.0
Unskilled services	EDB	1.9	8.1	29.4	9.7	2.1	2.0	6.1	5.4	0.0	0.0	0.0
Unskilled commercial and administrative occupations	EVB	0.0	1.2	8.7	51.0	0.9	3.0	2.6	6.2	0.0	0.0	11.1
<u>Skilled jobs</u>	7.7	42.2	43.3	29.6	90.2	83.8	83.6	76.0	72.8	56.2	28.7	57.7
Skilled manual occupations	QMB	7.7	36.7	33.7	18.1	86.7	42.4	30.4	6.2	36.0	9.3	24.4
Technicians	TEC	0.0	1.2	0.0	1.3	0.9	38.4	0.0	0.0	14.0	3.7	11.1
Skilled services	QDB	0.0	2.5	3.4	1.3	2.1	0.0	49.8	2.3	0.0	0.0	0.0
Semiprofessions	SEM	0.0	0.6	1.9	0.6	0.0	1.0	1.7	55.2	2.3	0.0	0.0
Skilled commercial and administrative occupations	QVB	0.0	1.2	4.3	8.3	0.5	2.0	1.7	2.3	6.2	3.7	22.2
<u>Highly skilled jobs</u>	0.0	0.0	0.0	0.6	0.0	2.0	1.7	12.4	2.0	43.8	71.3	31.2
Engineers	ING	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	42.2	0.1	4.4
Professions	PROF	0.0	0.0	0.0	0.0	0.0	0.0	1.7	12.4	1.6	71.2	13.3
Managers	MAN	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	13.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	52	161	320	155	497	99	115	129	314	64	108	45







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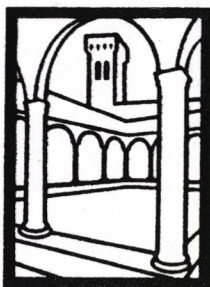
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